



case study

Resource Conservation Planning

This case study is one in a series developed by the Massachusetts Department of Environmental Protection (MassDEP) to highlight techniques for saving money and reducing the use of energy, water or materials in solid waste.

Background

Under the Toxics Use Reduction Act (TURA), certain Massachusetts companies that use large quantities of specific toxic chemicals are required to measure and report their results annually and plan for toxics use reduction opportunities every two years. Facilities that have completed six years of toxics use reduction planning may elect to develop a resource conservation (RC) plan for reducing use or other resources and to report on their progress.

Project Description: ITW Foils, Newburyport, MA

ITW Foils is a leading manufacturer and distributor of high-performance foils, films, and foil laminates in the graphics industry. ITW Foils elected to develop a resource conservation plan focused on solid waste reduction in 2008 and reported on its progress in 2011.

Solid Waste Reduction Initiatives

ITW Foils identified and implemented several options to reduce the amount of solid waste at their facility which included:

- Recycling of all PET (polyethylene terephthalate) waste film
- Reduction of PET film thickness
 - This decision was driven by cost and process efficiency. Reducing the film thickness increased the linear feet per roll, therefore decreasing the total number of machine starts and stops. The film thickness change enabled the following reductions: waste film, coatings (hazardous waste), energy, and labor. ITW actively monitors the cost and availability of thinner PET films and trials them in production when it is beneficial.
- Reuse, return, and recycling of roll packaging
 - 98% by weight is reused or returned to supplier
 - 1% by weight is recycled
- Elimination of corrugated cardboard from roll packaging
 - ITW Foils requested that suppliers eliminate excess corrugated packaging and all film suppliers were happy to comply. There were no negative impacts in film quality from this decision.
- Introduction of corrugated and paper recycling programs

Solid Waste Reduction

Asset	Baseline Amount Used (Tons/Year)	Reduction Goal	Expected Savings (Tons/Year)	Actual Savings (Tons/Year)	Percent Savings Achieved
Solid Waste	472.3	60%	287.6	360	76%

Summary

Natural Asset:

Solid Waste

Cost Savings:

\$80,000
annually

Project:

Solid Waste
Reduction

Total Energy Reduction:

76% reduction in
annual use
2008-2011

Benefits of RC Planning

ITW Foils recognizes the value of RC planning in their ongoing business and production practices, especially in terms of solid waste reduction. Some of the benefits of RC planning include the ability to:

- Increase recycling initiatives and lower material demand growth
- Improve the company's competitive business position through increased sustainability
- Better manage existing systems and upgrades in technology
- Produce environmental and health benefits through less waste
- Increase cost savings from reduced material usage
- Foster progression of knowledge, innovation and company development

Keys to Success

- **TUR Planning:** Techniques and tools learned during TUR planning were applied to implement the solid waste reduction projects, resulting in a much greater reduction than originally estimated.
- **Planning:** Before beginning the project, ITW Foils developed a detailed plan, including a timeline for decreasing solid waste.
- **Feasibility:** During planning, all options considered for implementation were well-researched and determined to be both technically and economically achievable.
- **Inclusion:** ITW Foils designed its resource conservation plan to address all aspects of solid waste at their facility.

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Additional Resources

- Massachusetts Department of Environmental Protection (MassDEP) website on the Toxic Use Reduction Act (TURA) Resource Conservation Planning: <http://www.mass.gov/dep/toxics/tura/rcplan.htm>
- ITW Foils website: <http://www.itwfoils.com/>

About ITW Foils

The company's goal is to make brands shine through high-performance foils, films, and foil laminates in the graphics industry. ITW Foils is a producer and supplier of components for decorative packaging applications and ensures high quality products through a comprehensive approach including extensive research, development, testing, manufacturing and distribution. ITW Foils employs 70 people at its Newburyport location and also has sites in Connecticut, Florida, California, the United Kingdom, Europe and South Korea. The parent company, Illinois Tool Works (ITW), is headquartered in Chicago. ITW is comprised of 90 divisions among seven different market segments with operations in 57 countries. The company employs approximately 49,000 people.

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